William Sherman

His Book

Plymptom 1816

John Rauches

Receipts on Dyeing

Cotton & Woollen

Irene St

Observations on dying wool and woollen cloth

Wool and woollen cloths must be well cleaned of all greasy or oily substances great attention must be paid to this for if the cloth is not perfectly cleansed of grease it will receive no perfect colour and even if the colour should appear good it will always rub off and soil this is too often the case with american manufactured cloths i will now inform you of the best method that i have got acquainted with and you may depend that with ten years travelling from one factory to another i had a chance of seeing a great many different ways of doing it first i shall inform you of the best way of scouring wool for that purpose you must prepare an iron kettle of 50 or 60 gallons near a stream of water where you can ~~press~~ wash the wool as soon as it comes out of the boiler A wooden box about 4 feet square is placed in such a situation that a stacy stream of water can run through it wherein the wool must be washed after it is taken from the boiler fill the boiler with three fourths of water and one fourth of old urine heat the liquor to 100 degrees then put about 10 pounds

of wool loosely into it and keep turning it round for ten or fifteen minutes however you cannot ascertain by the time how long the wool has to remain in it you must find that out by often taking out a little of it and wringing it in your hand if you find that the grease wrings out of it easy and leaves the wool clean and open you may take it out and wash it as clean as possible. the best way of ascertaining when the wool has been long enough in the kettle is to take out a small handfull of it and wash it well in cold water wring it out in your hand and if the wool is divested of its grease it will rise up in your hand as soon as you open it and appear lively loose and clean but if it is not scoured enough when you open it in your hand the wool remains in a ball and feels hard and greasy in this case you let the wool remain a few minutes longer till you find that it will wash clean. should the wool be uncommon greasy as some of the full blooded American wool sometimes is then you will do well to add the liquor

in the kettle after the wool is in about one pound of fullers earth finely pounded and this will assist greatly to dissolve the dung &c that sometimes sticks to the wool after taking out the first ten pounds leave it to drain over the boiler and replenish the kettle with one pail of water when at the regular heat another ten pounds of wool are put in and washed as before; as soon as the wool has drained enough over the kettle it must be well washed in running water till the water runs clear from it the warmer you put the wool into the running water the better it will wash. and if you could have a boiler of about 100 gallons placed near the scouring kettle with warm water it would be a great advantage to wash the wool in it for about ten minutes after it has been scoured in the kettle and then in running water as before mentioned. the liquor in the boiler will answer a great deal better to replenish

the scouring kettle then the water would and the boiler may always be filled up with fresh water in this manner continue to scour wool all day in the evening let the liquor in the kettle and boiler cool the next morning you will find on the surface of the liquor in the kettle a greasy substance which you take off carefully add about six gallons of old urine to the remaining liquor and as much of the liquor in the boiler or else fresh water as will be required to fill the kettle then heat it again as in the beginning and work the wool in the same manner as before from time to time you may add a little fullers earth to it if the wool should be any ways greasy the older the liquor gets the better it will scour the wool and you must therefore not expect to have the wool

as white the first day as it will after wearse
the liquor gets three or four days old
some persons follow the practice of adding
every time they take the wool out of the
kettle a few gallons of urine to it this is only
unnecessary but even injurious to the wool
for so much urine will harden the wool
and give it a yellow appearance
if the wool is scoured and worked in this
manner and well dried it will be fit for
dyeing or carding and may be manufactured
into cloths you will probably sometimes
receive broad cloth to full which will
not full every way alike and will
leave places of 2 3 or 4 inches from list
to list that will full either faster or
slower then the rest of the cloth this
fault is generally laid to the spinner
but the fault lies as often in the weaver
and sometimes in the sorting of the woo

the s. should the spinner be neglectful in
and twisting the yarn and twist some of
it more than the rest you will observe
after the cloth is fulled that the hardest
twisted yarn has not fulled up so much
as the rest and of course makes the cloth
wrinkled up in some places which is
denominated cockled cloth and sometimes
ruins a piece of cloth entirely sometimes
the weaver does not wet his bobbins all
alike and then the yarn will not
weave close together alike for the
better the bobbins is wet the closer the
yarn will weave together and should
the weaver put a dry bobbin or one
partly dry into a peace where he before
wove wet bobbins he cannot weave the
yarn as close together and when
such a peace of cloth comes to be
fulled that place will full faster

them the rest of the piece and of course
will wrinkle up. course wool will
full much faster than fine and if
the wool should not be well sorted with
part of the fine wool spun by itself
and part of the course by itself it will
it will produce the same effect and
make the cloth crocked Manufacturers
should be verry careful to have the
warp for a peace of cloth spun by
one hand and likewise the filling
and then wove by one weaver should the
cloth still begin to wrinkle you
had better full it up to 7 or 8 quarters
only for in that state it will not be
so bad as if you should full it down
to 6 quarters wide and will sell well
enough for Ladys cloth

Process of Scouring Cloths from the Loom

After the cloth comes from the loom it has to be pulled or picked by which process the cloth is divested of all knots nubs double threads &c and after that it has to be divested of the grease which it contains and for that purpose prepare the following liquor put into a kettle ~ ~ ~

W. I gallons of old urine O gallons of good soft soap

W quarts of beefs gall H pounds of perlash

A fire is made under it and heated till almost boiling empty it into a tub and let it stand till almost cold lay the cloth which you wish to scour on the floor and sprenkle it with said liquor till it is all equally wet put them into the fulling mill and lett them work for what twenty

minutes take it out and open it should
there then be any dry spots on the cloth
wet them with some of the prepared
liquor the cloth is then put into
the mill again and run 20 or 30 min-
utes longer then take a corner of the cloth
between your thumb and finger and
wring it out if the cloth is sufficently
scoured you can wring a greasy substance
out of it and the cloth will remain
white if this is the case you may let
the water run on it and keep washing
it for 10 or 15 minutes then take it
out overhaul is put it into the mill
again and wash it for 30 minutes lon-
ger then take it out and dry it
this process will most always clear
the cloth completely of all the grease
but to be certain of that you examine

the cloth by looking through it and should you observe any black spots in it then there is more grease in it and to get that out you will have to dry your cloth then wet those greasy spots with some of the same liquor put the cloth into the mill scour and wash them as before — it is essential to have the cloth scoured very clean for should any grease remain in it it will not take a good couler or the coulour that may take will not be permanent but will always rub and rub off this fault is often found in American goods it is always best to put the cloth into a fulling mill after it is wet with the liquor as mentioned and afterwards wash it

out in a crank mill for a fulling mill will stard the grease best but a crank mill will wash better ---

Process of Fulling Woollen Cloths

For 40 yds of broad-cloth put into a kettle WA gallons of water and WA pounds of white bar soap finely cut up let it dissolve over a moderate fire and afterwards let it cool till it is blood warm then put about H gallons of this on 40 yards of cloth as even as possible put it into a fulling mill and let it run for one hour then take it out and over haul it the cloth ought to be kept so as to lather a little during the whole time that they are fulling and they must be overhauled ~~every if they~~

very hour if they full ~~fast~~ fast but if they full slow only one in an hour and a half. Cloth that has been dyed blue in the flannel must be wet with a weak liquor of soft sope and water then scoured in the fullingmill for about 15 minutes afterwards well washed in the crank mill then dried and fulled in the foregoing manner. — —

Process of Scouring Cloth after Fulling And Dying — —

~~pro~~ For 40 yds of broad cloth put into a kettle 7 gallons of water & 21 gallons of soft

Sope 4 lbs of pearl ash and some beef gall let these heat together till it is mixed well then let it stand till it is almost cold wet the cloth with it as even as possible and put it into the fulling mill for 30 minutes then take it out over haul it put it into the crank mill and wash it one hour during that time you have to take the cloth out of the mill 3 or 4 times and have it over hauled so that it may wash every way alike and should this process not clean the cloth sufficently then you have to repeat the same process once more the cloth should always be well washed immediately after dying in a crank mill with water only and then dried before scouring, - - —

Observations on Dying Wool Blue

To dye a handsome and fast dark blue coulleur on wool is of the greatest importance

in this county at present for there are but very few factories that acquainted with the process of making this colour and the greatest part of the woolen factories in the united states have therefore to dye there cloth black green brown or of a mixture which colourers will not sell by two dollars per yard as well as cloth of a good dark blue coulor dyed in the wool besides blue cloth will always find a ready market. — — —
there are several ways of blue dying practised in this country the oldest method known in the ash vat which is a composition of indigo lime potash madder brand wood it is in imitation of a blue dye known in england by the name of wood vat and has been practised by the clothers in the eastern states for more then ten years past the colour which it produces is not permanent and it will not stand the process of fulling several factories that adopted this method laid it aside and bought my art of blue dying for sums from five hundred to one thousand dollars each

another process is the dying of blue in a wood vat in
vat this method was the only one practiced
formily in france and it was believed that
wood was essentially necessary to make a perman-
ent colour but within the last ten years it has
been proved by several chemical experiments
that wood does not add any thing to the perman-
ency of the colour any more then that it creates
a fermentation in the blue vat which may
be produced equally as well by some other
vegetable substances and the french dyers are
now at liberty of dying blue with wood or
without it - . . . . . .
wood vats are still in use in the large factories
in france because wood is very cheap there and
a great deal of cloth may be dyed in those
vats as said vats are generally large i will
give you an exact desenption of this wood
vat in some of my following letters first
i shall instruct you in a new mode of
dyeing blue which has been practice about

in the four years in several of the best woolen
ven factories in this country by my directions
and instructions with the best sucess i have
been fortunate enough to discover in this
country a substitute for wood which may
be obtained in most parts of the united states
for little or no expence and wich will not
only answer all the purposes of wood but
is a great deal preferable for the operation
is certain and always produces th desired
effect whereas wood very often is brought
to this country intirely damaged or of
such bad quality that it will produce
no fermentation and many blue vats i
have seen lost for this reason only which
cost several hundred dollars . . .
By long experience i have brought my
method of blue dying to systematic perfection
and with the assistance of two instruments
one to ascertain the heat and the other
the strength of the dye it is an easy

method of working a blue vat and to keep it in order and if you follow the directions exactly which I shall give you in the ensuing letter you may depend on succeeding in setting and working a blue dye to perfection.

Preperation for Doing Blue

The first object is to get some blue vats made that will hold from 400 to 600 gallons they are made of different materials and in different shapes formally they where made entirely of wood and set in the ground such vats had the inconvenience of taking liquor out from time to time and then reheated in a boiler then emptied back in the vat and then the cloth dyed in it for 3 or 4 days till the dye gets too cold but in this manner you never can keep the dye at a regular heat and the colour which is produced from it will not be so good

as where the blue vat can be heated some vats are made entirely of lead and a fire placed round the centre of it this plan answers well enough but it is verry expensive for the lead must be very thick or else it will bend.

others are made of part wood and part copper for instance a wooden tub with a bottom of about one foot wide and two feet high is made of good strong plank then a copper circle of about two feet high is placed and fastened to the wooden tub. and another wooden curb of two feet high, and five feet wide is fastened ~~to~~ on the copper circle so that you will have a vat almost six feet high the middle of it of Copper against which part you can place a fire and by that means regulate the heat of your dye at pleasure this plan is verry good but still more expensive than that which is generally adopted and

which answers every purpose ~~~~ as fine
A vat made after my plan consists
of an iron kettle of about eighty gallons
to which you fix a wooden curb made of
sound two inch pine plank which has to be
four feet high and five feet wide on the
tub iron bound and the narrower part of it
so as to fit inside of the kettle the curb must
be fastened to the kettle by iron bands and
well calked afterwards with oakum you
place the kettle about 6 inches deep in the
ground then build a fire place against the
center of the kettle and let the flue go
round it as much as possible:- the upper
part of the kettle shal then be masoned
up and a chimney built to carry of the smoke
this kind of ~~will answer very~~ blue vats
will answer every purpose and are very
cheap and therefore most always preferred
for a small factory tho such vats will

as where the

be sufficient but a large establishment may require four or six according to the quantity of wool which has to be ~~out~~ Dyed blue — the necessary tools required to colour blue are generally known therefore a particular description of them would be useless I will only observe to you what is principally wanted first a cover to cover the vat the better to retain the heat this cover may be made in two or three pieces so as to be convenient to take off or put on. A net is required to Dye the wools in made of strong twine and netted as close as possible it has to be full as wide as the blue vat and 4 feet Deep. an iron circle is wanted next which should be placed in the vat about two feet from the

bottom the circle to be interwoven with twine as fine as the net itself so as to prevent the wool that might fall through the net from going to the bottom and likewise if you Dye cloths to prevent that from sinking too low and there by Disturbing the sediments of the Dye two strong posts are placed close to the blue vats and a pair of strong iron wrings fixed to them about two feet above the blue vat with a cross on one side of them for the purpose of wringing out cloths if you should have to Dye any. four feet above the vat you have to place a windless across from one post to the other of about 4 ~~feet~~ inches diameter with a cross on one side of it to wise the net with the wool out of the Dye - - - two strong pine sticks of 5 inches Diamitre and eight ~~inches~~ feet long are tied together

on one end in the shape of a lemon squeezer and
and with them you squeeze out your Dye out of the
wool after it comes out of the vat as Dry as possible
A square pine stick of about 3 inches Diameter
is placed across and only about 2 or 3 inches above
the blue vat a small crank is fixed on one side
of it and the cloth is rested over this stick slowly
and having this process the cloth is well opened
on one side and perfectly kept under the
liquor after it comes under the other side
this method is a great deal preferable to the old
way of working the cloth from side to side with
two handles or hooks for the cloth has unequal
chance of partaking of the Dye and there
is no danger of having any holes in the
cloth as it is often the case with the handles.

you want farther two good pine tubs iron bound and with covers you mark these tubs with No 1 and No 2 the tub No 1 will contain liquor to strength en the blue Dye and tub No 2 will contain liquor extracted from vegatable substances which create and keeps up the fermentation of the blue Dye a great deal better and more regular than wood does I cannot inform you of these secrets to make these liquors but you will find them in your last letter together with a key to those letters which I have adopted in all my Receipts instead of figures this last letter shall never be printed but you will at the end of this work receive in my own hand writing for I consider it my Duty due to my former apprentices who pay me several hundred dollars for the same receipts not to publish them to the whole world but only

to communicate them to a few that are willing
to pay at least one hundred Dollars for each
copy without so or letter wrote by my own hand
the whole work will be useless and you will
therefore preserve that letter carefully By
that you will be informed of the process of
making the liquor that will substitute the
article of wood and for the sum of five $
you can make as much liquor as will answer
better than than 300 dollars worth of wood
In the receipt on blue Dying you will find
it verry often observed that some liquor of
tub No 1 or tub No 2. is requered and you
will therefore remember that it alludes to the tubs
mentioned in this letter and No 1 will always
contain liquor to strengthen the Dye and tub
No 2 will contain the substitute liquor for wood

Process of Setting a Blue Vat

To begin a new blue dye take 50 gallons of clean water in a boiler and add to it one pail of wheat bran boil it for 30 minutes then empty the whole in the vat fill the boiler again with 50 gallons of water and add to it. W.M pounds of wheat bran
W.M pounds of potash
W P pounds of madder
boil it together for 30 minutes then let it settle and put the clear liquor in the vat with the first liquor and when the heat of this liquor in the vat stands at 135 or 140 degrees by thermometre then you add to it I pounds of good indigo finely ground and 5 gallons of the liquor of No 2 as discribed in my last letter ---

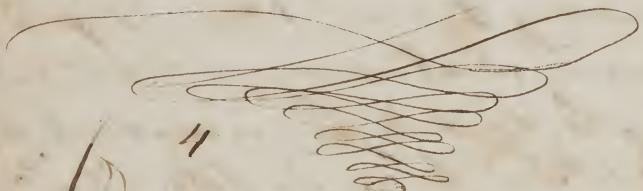
the Dye is well raked afterwards and covered up and kept at a regular heat say from 110 to 130 degrees but it is best to keep it always at the heat of 120 to 125 degrees morning and evenings the Dye ~~the~~ has to be raked and in four or five days some copper spots will appear on the surface of the Dye and the day after the dye will be covered with a copper skin and the flowers of skum on it will be of a dark blue colour then you must add to the Dye one gallon of liquor No 1 and half a gallon of liquor No 2 in the morning the same quantity at noon the same again in the evening and rake the Dye well each time should it not have that copper

appearance on the fifth day then you
will have to add morning and evening
one gallon of liquor No 2 untill the Dye
has some handsome copper spots. ---
If this dye of one hundred gallons is in good order
then take one hundred gallons of clear water boiled in a
and add to it W M lbs of wheat bran W M lbs of
potash W P lbs of madder boil it as before for 30
minutes then leave it to settle and when you
can have your finger in it empty the clear
liquor in the blue vat with the first dye and
add further 1 lbs of good indigo fine ground and
5 gallons of liquor No 2 to it the dye is then
well raked and covered up and by the next morning
there will be a copper skum on the surface of it
then raise the dye up then add to it one gallon
of liquor No 1 and half a gallon of liquor No 2

in the morning the same quantity at noon and the same again in the evening but if there should be no skin on the dye the first morning then the dye must be only raked up morning and evening which will cause the copper to appear the second morning and then you have to add liquor No 1 and 2 to it as above mentioned and when this dye of two hundred gallons is in good order then you will put two hundred gallons of clear water in a boiler and add to it W M lbs of wheat bran A W lbs of pottash A Q. lbs of madder boil this as before for thirty minutes then let it settle and add the clear liquor to the blue and add further W M lbs of good indigo fine ground and II gallons of liquor No 2 let the dye be well raked and covered up next morning

and evening rake the dye and by the second morning there will be a handsome oppen skin in the surface of the dye then add to it 2 gallons of liquor to No 1 and one gallon of liquor to No 2 in the morning the same at noon and again in the evening Next morning you put the silver scale of which i shall give you an account in my next letter in the dye and if the scale stands at 42 or 43 then the dye is in good order and you may begin to dye in it but should the scale stand at 41 or 40 then you must add every three hours 2 gallons of liquor to No 1 untill it stands at 42 By following these directions you will have a dye of 400 gallons but in case your vat should hold only 300 gallons then you have to take only one hundred gallons of water instead of two hundred for the last boiling and every thing in proportion.

John Rauch's Receipt
On Dyeing



4

John Rauch's
Blue Dye Receipt
To 400 gallons water 35 lb Wheat Bran
41 pound of Potash 5 pound Madder
20 lb Indigo. 8 gallons Liquor No 2
8 gallons Liquor No 1

Best Black Calculated for 40 yards of Broadcloth

To dye the best black the cloth must be dyed all blue first and well scoured out afterwards. The following black liquor must be boiled several days before you dye your cloth. Fill a boiler with 400 gallons of water and add

8 N lbs of logwood
N lbs of shoemake ground
N lbs of white oak bark do
A lbs of nutgalls pounded

Boil these together one hour then dip the clear liquor off and put it in a wooden vessel and let it stand for some time this liquor may be used in 8 days but if you let it get two weeks old it will be better

Two days before you want to dye your blue you put into a tub

T gallons of boiling water and

W N lbs of copperas

and stir it till it is dissolved and before you use it take the skum off from the surface

Carried over

When you want to dye your Cloth fill a boiler with about 250 gallons of the liquor prepared as afforesaid and when it is boiling put the Cloth in it and boil it for one hour then take ~ 8 gallons of the prepared Copperas liquor and add it slowly pint after pint to the liquor in the boiler the Cloth should be kept continually turning and boiling for an hour longer when the Cloth has been in the boiler 2 hours then take it out and cool it well. then replenish the boiler with some of the prepared liquor and add ~ W gallons of the prepared Copperas liquor to it and when boiling the Cloth should be put in and boiled for 2 hours and then taken out and cooled. the boiler must then be replenished with the remaining liquor to which should be added ~

N pounds of pearbash W lbs of verdigris

W lbs of cream of tartar ~

half a pint of beef gall and the remainder of the copperas liquor. and when it begins to boil put the Cloth in it and boil it one hour then take it out cool it and wash it then fill the boiler with fresh water and dissolve in it 1 lb of hard soap and when boiling put the cloth in and boil it for 15 minutes then take it out and scour it well —

Common Black for 40 yd of broad cloth fill a boiler of about 250 gallons with water to which add 25 M lb of logwood 1 pound of shoemake 1 pound of white oak bark 1 A pound of nut galls pounded boil these for two hours then replenish the boiler with fresh water and when boiling put the cloth in and boil it for one hour then dissolve 1 lb of copperas in some of the boiling liquor and add it

Carried over

When you want to dye wool Cloth fill a boiler of about 2 or 3 gallons of the liquor prepared as afore said and when it is boiling put the Cloth in it and boil it half one hour then take 1 gallons of the prepared Copperas liquor —

gradually to the liquor in the boiler and keep the Cloth continually turning for one hour longer and after it has been in the boiler for two hours take it out and have it well cooled. replenish the boiler with fresh water and add to it A pounds of Copperas. and when boiling the cloth must be put in and boiled for two hours then take it out and cool it the boiler should then be replenished with water and add the following articles to it. — — —

N lbs of logwood A lbs of shoemake N pounds of verbash S lbs of Copperas W lbs of verdigris W pounds of cream of tartar

let these boil together for 15 minutes then put the cloth in it and let it boil for one hour then take it out and cool it should the collour not be bansome enough fill the boiler with fresh water and boil 1 pound of fustick in it for 30 minutes and afterwards add a half a pint of beefs gall to it then boil the cloth for an hour and let it be well scoured

---

Scarlet Read

for 40 pounds of wool or woolen Cloth ingre are to make the following composition some days before you want to dye your Cloths . . . . put into a large glass bottle or into several small ones 5 1/2 pounds of best spirits of nitre 1 lbs of river or rain water 1 oz. of salmoniac pounded mix these ingredients well together then add

to it gradually 8 pounds of grained tin —
And when all this is dissolved then stop the bottle
up and this composition will keep good for several
months and it may be used in 24 hours after
the tin is dissolved. —
the water used to dye scarlet has considerable influence
on the colour and you must therefore be very
particular to obtain either rain water or a
water equally as soft for this colour you have to
be likewise very careful in having all your tools
your boiler &c: very clean such as is generally
used in the Mill which is generally already sufficiently
teacled and shared so that after they are dyed they
have only to be washed in cold water then dried and
once shared without napping for a scarlet colour will
have no soap as it would turn the best of scarlet into
a common colour.
fill a boiler of about one hundred gallons
of water and when ~~[illegible]~~ it is handwarm
add to it 8 pounds of cream of tartar and
8 lbs of cochineal finely pounded and sifted
and when almost ready to boil then add further
8 lbs of the before mentioned composition and
as soon as it [illegible]

that it has not any with it. the boiler is
then filled with fresh water and 8 lbs
of fine stone is dissolved and put into the
boiler and when more than warm the steam
must be taken off and A B C which fine of
paste is put into it a little at a time —
1 lb of the clear composition is made to set and
mixed together in the boiler or dye boiling
the cloth is put into boiling or hot
water and boil then taken off and cold shave
dry the steam not having enough use more
the composition into the boiler and
all the wool for 15 minutes more
and if you wish bright colours strike
dark every other colour as bright as you
will and the first colour will be more
of boiler and redness W. of green and
orange —

Olive On Woolen & Broadcloth

fill your boiler with about 250 gallons
of water and add to it 7 lb of alum and

A pound of cream of tarter when boiling
put your cloth in and boil it for 2
hours then take it out and cool it the
the boiler the boiler should then be
replenished with fresh water to which add
A H lbs of fustick A lb of curaway tarra
roi W lb of maunder boil it for two hours
hours then take it out the liquor the cloth
in it for one hour then let it be
cooled afterwards replenish the boiler
with fresh water and add to it W M lbs
of logwood in a bag boil it for one hour
then take the bag out and add further
A lb of perlash to it and boil your cloth
in it till it is dark enough and if that does
not make it dark enough add some more
logwood and copperas and dip it again
till the colour suits if you wish to have
a green olive add some of your compound
to the fustick liquor before you dye your
cloth in mix your dye well then run
till your colour suits —

Navy Blue on woolen to broad
fill your boiler with about 250 gallons
of water and add to it 4 lb of Aqua ras
W lbs of of Allum 8 lb of cream of tarter
8 lb of verdigrice and when boiling put
your cloth and boil it for one hour
then let it be taken out cool it and
wash it in the boiler then empty it out
fill it again with fresh water then put
in a bag A M lb of logwood and boil it for
one hour but the bag and replenish the
boiler with some fresh water and add
A lb of madder to it when boiling put the
cloth in and boil it for half an hour
then let it be taken out and cooled
afterwards add to the liquor in the
boiler A lb of blue vitriol and W lb of
pearl ash and boil your cloth in it
for half an hour then take it out
cool it and wash it.

Beaff Colour on Woolen 40 yards

Fill your boiler with about 250 gallons of water then add to it 1 lb of Allum and 4 lbs of of cream of tarter and when it is boiling put your cloth in boil it and boil it for two hours then take it out and cool it the boiler in then fill it with fresh water and add 12 lbs of fustick are boiled in it for one hour then take out the chips and replenish the boiler with cold water and add 4 lbs of madder to it then put the cloth in and boil it for one hour and afterwards taken out cool and washed if your want the colour darker put some copperas in the remaining liquor and dye the cloth again untill it pleases you

The End of Sixth Board

R. E. G. E. S. P. T. A.

1 2 3 4 5 6 7 8 9 10 Washington Letter 1st

William Sherman

Process of working and renewing a blue vat

the cloth you want to dye blue should be scoured
every clean of all grease then wet in hot water
and left to drain for some time then dip it in the
blue dye for 15 or 20 minutes then let it be
wrung and aired and dip it again in the same
manner two or three times till it is dark enough
commonly three times are sufficient before
fulling and one time more in a good strong dye
after the cloth is fulled after every dip
you make you add to the dye one gallon of liquor No 1
and one gallon of liquor No 2 then rake the vat
well keep the vat always at the regular heat
from a 120 to a 125 degrees and let it settle
for two hours before you dip again these rules
should always be observed unless the dye should
be too weak too strong too much fermented or
not enough in either state you must follow
the directions which i shall give you in my
next letter you may make 3 4 or 5 dips in a
day in one blue dye and so for 5 or 6 days
till the dye is mostly used out i should

however advise you not to refuse the dye the first time but renew it if the indigo is about three fourths used out for the dye is the most difficult to manage the first time and the fermentation of it might be stopt if the dye was worked too hard and reduced too low. I generally calculate to renew some of my dyes on saturday afternoon and then they will be in good order by monday. To renew a blue dye you make the dye well up then take about 100 or 150 gallons of the liquor put into a boiler and add to it WM pounds of weet brand and A pounds of madder boil it together for 30 minutes then let it settle and afterwards emp the clear liquor back into the blue vat and add to it further WI pounds of indigo finely ground and 5 gallons of liquor No 2 make the dye well afterwards and the next morning there will be a handsome copper skin on the surface of it then add to it W gallons of liquor No 1 and A. Do of liquor No 2 and make the dye well in three hours afterwards

you have to ascertain the strength of the dye
with the silver scale stands at 43 then the
dye is strong enough and you may begin to dye
in it but should the scale stand at 37 or 42
then you have to add the same proportion
of the liquor 3 & 2 and 2 to dye in the morning
every three hours till the scale stands at 43
when you renew the dye the second time
you may raise the strength to 44 degrees
and at the third renewing at 45 degrees
but in future it is best to keep it as near
45 as possible and if you should find that
the dye should get as strong as 48 or 49 degrees
then you may work the dye out as low as possible
so as to get all the indigo out of it then
let the dye settle overnight and in the
morning following you dip about two hundred
gallons of the clear liquor out and put the
same into proper vessels then empty all
the remaining liquor and sediments
from the blue vat afterwards empty those
200 gallons of clear liquor back into the vat
then take as much water in a boiler

as will fill the blue vat up again and add to
WM lbs of wheat bran and
8 lbs of potash
4 lbs of madder
boil these together 30 minutes then let it to settle and empty the clear liquor in the blue vat to which then add
WI lbs of indigo and 5 gallons of liquor No 2 and well rake it afterwards and next day you add of liquor No 1 and 2 to it till the scail stands at 45 and the fermentation is in proper order

John Rauch Receipt
on reviving a vat

To Dyed of Nicaragua wood for 40 yds B Cloth
40 yds of Broadcloth
fill a boiler with 250 gallons of water
and add to it 7 lbs of Allum and 4 lbs
of cream of tarter and when boiling
put your cloth into it and boil it for
two hours then take it out and cool it
and and wash it then empty the boiler
out and fill it again with fresh water
to which add 4 lbs of Nicaragua wood
tied up in a bag let it boil for one
hour then take the bag out and boil
the cloth in it for five hours then take
it out and wash it if you want a
crimson colour add some perlash to
the hot liquor and boil the cloth in it
again for 15 minutes and if it should
not be good enough add more
perlash then gain till your
Colour suits

Camwood Brown. for 30 yds of Broadcloth

Fill your Boiler with about 250 gallons and add to it AH lbs of camwood boil it for one hour then put the cloth in boil it for one hour then let it be taken out and cooled afterward replenish the boiler with fresh water and add to it WA lbs of bill of vitriol A lbs of copperas and W lbs of blue vitriol when boiling put the cloth in and let it boil for one hour then take it out and wash it then empty the boiler and fill it with fresh water to which add WA lbs of logwood boil one hour then take the chips out and dissolve S lbs of copperas then put your cloth in boil it for one hour should the liquor not appear strong enough you must put some more logwood and copperas and dip it again till your colour suits

Receipt on Dying Cotton Blue to Perfection

Receipt for the Cotton Vat

To set one Hhd. put in 7 lb. Indigo 14 lb. copperas plunge them well together, then take 16 lb. of unslack lime and slack it and put it in whilst it is hot plunge them well together then fill up by degrees after you get it filled up plunge again, Recruit with copperas and lime as the strength gets out

Remarks —

Boil your yarn well in a weak Perlash liquor or Potash liquor

When the Indigo is out empty your Dye away and set a new one in the same manner.

Receipt for Making Soap

To 100 lb grease put in a kettle put in 100 lb of Potash cut up 3 pails of water when it begins to grow warm you must begin to stir it and stir it when it is boiling boil it 10 hours then you may dip it of and reduce it as you Please with water it is better to have part hot water and stir it well when mixing This will make about ~~10 barrels~~ 8 Barrels

For making Beer to ferment into Bier

Put in a kettle that holds a Barrel 1 hops ~~[illegible]~~ 6 qts wheat Brand Boil them well for 2 hours then put in 4 mudder when simering hot let it stand 1½ hours then dip the clear liquor of in a tite cask even hand warm put your emptins in stop it [illegible] when this liquor is worked you may use it perhaps 2 qts at a time or as you Please

65. [redacted] 88 another

Receipt for a Woolen Vat, to perfection.

Grind 5 lb of good Indigo & put into a copper & put 2 lb of wood & dissolve 6 lb potash & put half into the copper & while it warm give a boiling heat your Vat put in 5 lb of madder & 4 gls of Brand & the rest of your potash. Boile the Indigo & wood 5 minutes then put it in the vat & plunge it well & let it stand 1½ hours then add 4 oz of boracks, plunge again & she will come to work.

Another Receipt for a Blue Dye

grind 5 lb Indigo in weak potash liquor, put 5 lb potash Desolved in to your Vat 5 lb madder 6 gls of Brand then rake your Dye well, then let it stand 1½ hours then if your Indigo is ground put it in your Vat with 3 lb Desolved potash rake your Dye again well ~~again~~ you should put your Indigo a grinding the Day before you want to use it and keep your Dye a good heat so that you cant have your hand in it

you may use Beed in this Dye if you Please

Receipt for making Compound Bluing for green by weight Mr Osmore

Take 4 oz of Spanish Indigo ground fine add to it 1 oz of oil Vitriol and a half a spoon full fine salt stir them well together and if they ferment you may expect it will be good you can try it by putting some on your finger and if it washes off in a short time after, you may think it not fit for use

Receipt for Drab Mr. Osmore

To 40 yds of Narrow fulled Cloth take 6 white oak wood green cut it up and hemlock and a little mixt of Madder and a very little of fustick boil these together then put your cloth in boil it for one hour then if your colour does not suit you you can alter it as you please if you want it on the red you must use a little more Hemlock when you want to darken you must cool your Dye so as to have your hand in it then add a very little copperas till your colour suits

Receipt for Scarlet on wool
for 1 wool

take 2 Drams of Spirits wine
2 Drams of white Tartar first dip
6 Drams of Lucacitron
15 Drams of Cochenell

Madder Drab
to
No 1. 200 wool B Weight

Take 3 Fustic
— 8 Madder
— 2 Camwood
— 2 Barwood
— 3 Shoemac
} Mix those together Sprinkle on wool when put in kettle as even as possible let simmer ½ hour stir well 2 hours

Darken with 1 Copperas. Simmer 2 hours

Madder Drab 150 B Weight

No 2 to
— 6 madder
— 1½ Fustic
— 1½ Shoemac
— 1 Cutbear
} mix those together Sprinkle on wool when put in kettle even as possible Boil 1½ hours Stir well

Darken ¾ Copperas pounded fine

No 3 to Camwood Drab 100 wool B W
— 3 Camwood
— 2 Madder
— 2 Fustic
} Mix those together sprinkle on wool when put in kettle Boil 1½ hours stir well

Darken ½ Copperas pounded fine

No 4 to Drab 100 wool B Weight
— 2 Madder
— 2 Shoemac
— 3 Quercitron
— 3 Fustic
} mix those together Sprinkle on wool put in kettle even as possible Simmer 1½ stir well

Darken ½ Copperas till cutbear sents

No 5 Reddish Drab to 100 wool

3 madder
1 Fustic
3/4 Shoemac
1/2 Cutbear

mix together those sprinkle on wool put in kettle simmer 1½ hours then stir well 2 hours

Darken to 1/2 Copperas

No 6 Lillock Drab to 200 B W

3½ madder
2½ Fustic
7 Shoemac
1 Nutgalls
4 Cutbear

mix those together sprinkle on wool when put in kettle as even as possible Boil 1½ hours stir well

Darken to 1 Copperas 1½ hours stir well

No 7 Pearl Drab to 100 B W

2 madder
1 Fustic
2 Cutbear

mix together those sprinkle on wool when put in kettle stir 2 hours

Darken 5 ounces of Copperas

No 8 Pearl Drab to 100 wool B W

1 madder
1/2 Shoemac
1/2 Fustic
1 1/4 Cutbear

mix those together sprinkle on wool simmer 2 hours stir well

Darken 4 ounces Copperas fine

No 9 Drab 100 wool B Wight

2 madder
1 Nutgalls
3/4 Fustic

Mix those together sprinkle on wool even as can when put wool in Boil 2 hours
Darken 4 oz Copperas 2 hours

No 10 Light

2 Madder
1/2 Fustic
1/2 Cutbear
1/2 Shoemac

Madder Drab
100 wool
Mix together sprinkle on wool when put in the kettle Boil 2 hours
Darken 1/2 Copperas

No 11 Light

3 1/4 madder
1 Fustic
1 Shoemac

Madder Drab
150 lbs wool
Mix together sprinkle on wool when put in the kettle even as possible
Boil 2 hours stir well
Darken 1/2 Copperas 2 hours

No 12 Silver

2 1/2 madder
2 Shoemac

Drab 150 wool B W.
Mix those together
sprinkle on wool put in kettle Boil 2 hours
Darken 1/2 Copperas

Method of preparing Leather for all uses Except when sprinkled on wool in kettle

Take of good unslaked lime 5 put in a tub, to Leather let it slack moderately then stir it well and let it settle be carefull have it clear for use NB

Plumb Colour 100 [illegible] Plumb

50. Nicuary } Boil 2 hours, then add 3 Allum & Cuthear
8 Logwood } 7 Cuthear prepared in lime
well mixed, then put in wool Boil 2 hours
Darken with 4 Copperas fill your Colour with

Scalock Colour 100 wool [illegible]
35 of Nicuary & 8 Logwood [illegible] 2 hours
add 3 Allum stir and also 12 Cuthear
prepared as below mix well stir well put in
wool stir thoroughly 2 hours
let your Dye cool down & stand over Night

Scalock Colour 100 wool
4 Nicuary 10 Logwood boil 2 hours
then take 6 lime stones put them into 3 pails water
to it let stand 2 hours then take the clear lime water
put it to 15 Cuthear mix well then put it in Dye
Kettle well Put in wool Boil 2 hours let it stand
over Night

Madder Red, 100 wool
50 Madder simmer 2 hours add 10 Allum put
in wool simmer 2 hours, still liquor put in
30 Nicuary Boil 2 hours

~~Cinnamon Drab~~

Buff Colour 100 wool

6 White Ash Bark in tube 1½ Nutgalls 10oz Madder
Boil 2 hours take out the Bag Dissolve 5 ounces Allum
stir put in wool stir 2 hours stand over night

Dark Lemon Brown 80 wool

Fustic 16
Madder 4
Sumach 6
} Boil in 12 oz B Vitriol
2 Copperas

Claret 100 wool

35 Logwood
6 Madder
mix together
} put in wool when put in kettle
let it simmer ½ hour then stir well
simmer 2 hours

Darken ½ Copperas ½ B Vitriol Boil 2 hours

Logwood Slate 100 wool

2 Nutgalls
1 Sumach
3 Logwood
} Boil together 1 hour put in wool
1 hour

Darken 1½ Copperas

Light Green 150 wool

Dark Slate ½ Blue
100 wool
4 Sumach
4 Madder
} put in wool 2 hours
Darken ½ Copperas

Light Blue
15 Fustic
10 Sumach
} 15 Fustic
10 Sumach
put in wool 2 hours
Darken ½ B Vitriol
3/4 Copperas

Light [illegible] 150 wool
Light Blue
5 Nutgalls } put on wool
6 Madder } Boil 2 hours
Darken 3/4 Copperas

Slate 100 wool
4 Nutgalls } put on wool
12 Camwood } sprinkle
Mix together } it on Boil
2 hours
Darken 1/2 Copperas

NB Dyeing your wool after Dyed Blue

Dark Slate 100 wool
Blue } 4 Shumac
} 4 Madder
put in wool Boil 2 hours
Darken 3/4 Copperas

Slate 150 wool
Nutgalls 3 } put on wool boil
Madder 6 } 2 hours
Darken 3/4 Copp

Slate 150 wool
Nutgalls 4 } put on wool
Camwood 12 } Boil 2 hours
Darken 1/8 Copperas

Slate 100 wool
Madder 6 } put on wool
Nutgalls 2 } 2 hours
Shumac
Darken 3/14 Copperas

Receipt for Blue Black on Wool. 300 lb

To 300 lb Wool Boil 100 lb Logwood in Bags 1 hour then take them out Put in wool Boil ½ hour then add 1 lb Allum stir 1 hour longer then add 8 lb Copperas 2 lb Allum pounded and stirred together stir your well when you put this on one hour

then let it remain in Kettle as long as you please

Philipson

Receipt for yellow 100 wool

Fustic 40) Boil together 3 hours —
Weld 10) then add 8 ounces Allum
to your Dye Put your wool in stir it
till your Colour sorts

Receipt for Claret 100 wool

Camwood 35 lb) Mix those together sprinkle
Madder 10) on wool even as possible
Fustic — 5 Simmer 2 hours
then add ½ Blue Vitrol Boil
1 hours, then add 1 Vitrol 1
Copperas made fine mixt together stir well
2 hours

Receipt for Dying Cotton

300 Cotton Black

Boil 300 logwood in Bags one hour then take your Bags
out put in cotton simmer ½ hour with constant stirring
then add 5 Blue Vitrol stir ½ hour longer then take it out
Cool it then put it in again stir ½ hour then add
5 Vitrol stir ½ hour longer Cool well

NB pound your Vitrol put it on when stirring
you may use this Liquor a week if you Please

Halifax 1843

Woolen Tin Liquors

Grained Tin melted in a ladle are passed off into a tub of cold water is the method of preparing tin for feeding acids When thus prepared feed by degrees –

Lack Spirit

No 1 Use 3 gall muratic acid 1 gall single aquaportis: feed with 6 lb of tin

No 2 Tin Liquor for Bark yellow or Citron
4 quarts of muratic acid 1 quart of Sulphuric acid feed with 3 grain tin

No 3 Tin Liquors for Logwood Purple or Puce
1 gall Muratic acid feed with 2 tin

No 4 Tin Liquors for Cochineal Scarlet Pink or Crimson
3 quarts single aquaportis 3 qts muratic acid feed with 40 ounces of tin

To Black ~~to~~ wool 50 Pounds

18 Logwood
1½ Medders
1½ Comwood

Sprinkle on your wool when put in

To Sodden with

2 Copperas
2 Salt

To Slate 100

10 Logwood
2 Cutteen
3 Comwood

Sadden to 1 Allum
3 Copperas & Red Tartar

Sprinkled on

~~Sadden~~
~~1 Logwood~~

To Navy Blue 150

4 Prepare
6 Allum
5 Copperas
2½ Vitrol

---

36 Logwood

Remarks on Blue Dyeing

1st Keep your Dye strong enough to keep it sweet with Indigo & Potash

2d When she ferments too hard with a little hard add a little Potash or ~~Bran~~ is too Blue or does not take hold of your wool if too strong Dont let your wool lay in with out stirring in not

3d If your Dye is strong with Potash or greasy or lost the fermentation put in a clean Bag of Bran a peck or marks you see fit settle this Bag at Bottom of Vat

4th if your Dye is turned sour or tainted you must scald it

If she heaves up the bottom of the Dye take a lump of Potash in tongs and carry it through the top of the Dye and let it go at the Bottom of Vat 2 or 3 or more if you please

If she wants Potash ~~sh~~ she will not take hold of wool Potash will not destroy the Indigo But hardens & Bind it To destroy is by fermenting with out working

Osmond

Receipt for yellow —

For 50 yds of Narrow full cloth

to prepare them take 3 lb Allum & cream tarter mix one hour then add to your Dye 25 of Fustic one pound of Nicaraway boil it for one hour then dip your cloth for one hour then cool and add to your Dye one pound of turmeric and dip your cloth again till your colour suits

Receipt for Red of Nicaraway

for 50 yds of Narrow full cloth

to prepare them take 3 lb of Allum dip your cloth one hour then then add to your Dye 20 lb Nigwaway then dip your cloth again for one hour then cool and add to your Dye 5 lb Nigwaway, 3 ounces of Roman Vitriol and dip your cloth till your colour suits

The Plymptons W M Company

Receipites

To 20 yards of narrow Drabb cloth take half a pail full of alder one pound of fustick chips 4 ounces of nutgalls then run your cloth 1 hour take it out cool it well then add to it 3 ounces of copperas and 2 ounces of red tartar or crewd tartar then run it till your couler suits you

---

To Colour Wool Purple

To 50 pounds of wool take 4 pounds of good copperas to prepare your wool in then rence it. then take 10 pounds of logwood and 6 pounds of Niguary and 8 ounces of blue vitral then dye your wool till your colour pleases you

---

Receipt for Snuff

for 80 yds of narrow cloth fulled
to prepare them take 6 lb of copperas
run them one hour then cool them
then run them one hour longer
then rence them out. then add 20 lb
Nigwary 20 lb of fustick then run
your cloth one hour then cool your
cloth then run again cool then add
9 oz of Roman Vitrol ½ pound pot ash
then run your cloth till your colour
suits you

Receipt for Black

for 20 yds of narrow cloth fulled to prepare
them take 8 pounds of copperas -
30 pounds of ~~copperas~~ logwood 5 pounds
of Nigwary 5 fustick 1 pail of shoemake

1 pail of alder let them boil together then run your cloth 1½ hour then cool then out then run it again 1 hour then cool then add 4 pounds of copperas 2 qts of seq ½ pound of pot ash 3 oz of Roman Vitrol

---

Receipt for Corbeau

for 70 yds of Narrow fulled Cloth
take 6 pound of camwood to the first run then cool then add 6 pounds of camwood then run your cloth 1 hour then cool then add 2 pounds of shoemake 3 pounds of logwood then run your cloth 1 hour then cool then add 4 pounds of copperas then run your cloth till your collour suits

---

Receipt for Snuff

For 60 yds of narrow fulled Cloth
To prepare them take 2 pounds of Roman Vitrol then run one hour then air and add 16 pounds of fustick and 6 pounds of

Camwood then run one hour then air and add 4 pounds of Camwood then run 3/4 of an hour then air and add 3 pounds of Camwood 4 ounces of Copperas then run one hour then air and add 5 pounds of Necuary 6 ounces of Roman Vitrol then run till your Colour suits - - - -

Receipt for Corbough

For 70 yds of Narrow fulled Cloth
Take 7 pounds of Camwood then run one hour then air and add 7 pounds of Camwood 4 pounds of logwood then run one hour then air and add 7 ounces of Roman Vitrol 11 pounds of Camwood then run one hour then air and add 9 pounds of Coppe ras then run till your Colour Suits

Receipts for Olive

for 30 yds of narrow fulled Cloth
To prepare them take W pounds of
Roman Vitrol then run them one hour
Then air then add 10 pounds of fustick
Chips A pounds of Camwood then run them
one hour then air and add W pounds of
logwood 8 ounces of Copperas 8 ounces of Roman
Vitrol then run them one hour then
air and run till your Colour Suits
Being Carefull to skim your Dye

Receipt for Olive

For 40 yds of broadcloth
To prepare them take N pounds of allum
W pounds of Cream of tarter then run one
hour then rince your Cloths then add
30 pounds of fustick chips T pound of
Necuary I pounds of logwood then run

two hours then air and run two hours longer then air and add W pounds of termerick W pounds of madder then run 2 hours then air and add W pounds of Copperas H ounces of Roman Vitrol then run ~~one~~ 2 hour then air and run till your Colour suits — — — — — — — —

Receipt for redish Drabb

for 20 yds of Narrow fulled Cloth take one pound of fustick W pounds of Nicuary H ounces of Vatgalls H pound of Alder N ounces of Allum boil them well together then run your Cloth one hour then air and run one hour longer then air and add H ounces of Copperas then run till your Colour Suits — — — — — — — —

Receipt for Cinnamond

for 60 yds of Narrow fulld Cloth take N pounds of Camwood then run one hour then air and add I pounds of Nicuary M pounds of fustick let them boil well together then add I ounces of Roman Vitrol

then run your Cloth one hour then add 7 ounces of Allum 2 ounces of pearl ash 7 ounces of Copperas then run your Cloth till your Colour suits

Receipt for Plumb Colour

for 60 lbs of wool take 7 pounds of Red wood 4 pounds of logwood boil them well then take 6 oz of Allum then dip your wool 1 hour then cool then add 4 oz of blue vitriol 3 oz of fluewood of tartar then dip your wool 1 hour then cool then add 2 oz of Roman Vitriol ½ pint of soap 2 pts of sizing then dip till your Colour suits

Receipt for Olive

for 40 pts of narrow fulled Cloth

To prepare them take 3 pounds of Allum run one hour then air and add 12 pounds of good fustick then run one hour then air and run one hour longer then air and add 2 pounds of logwood and 3 oz of Roman Vitriol then run one hour longer then add ½ pound of turmeric ¼ gill of bluing then run till your colour suits

A Receipt for A Clarret

For 40 lb of wool to prepare it take 5 lb of Allum A lb of cream of tarter when boiling put your cloth in and boil it one and a half hour then rense it out then fill your boiler with fresh water then add 30 lb of fustick then run your cloth one hour then cool then add 2 lb of limeriso 4 pounds logwood A pounds of madder 4 lbs of Nigery then run ½ hour then cool then add 6 oz of bluing then run ½ hour then cool then add 8 oz of copperas then run till your colour suits

Receipt for Bottle green

For 30 yd of Narrow fulled cloth to prepare it take A pounds of Allum then run one hour then rense it out then add an gill of bluing get your cloth a handsome blue then empty your kettle rense your cloth then add 7 lb of fustick when you get your cloth the right shade then add 5 lb of logwood 4 lb of copperas then run till your colour suits

Receipt for Blacks

For 70 yd of Narrow fulled cloth

To prepare them take 2½ Roman Vitriol
run them 2 hours then take them out add
to your Dye 30 Logwood then put your Cloth
in again run it for one hour then cool it
add to your Dye ½ pail full of chocomack
4 ounces of Roman Vitriol then run one hour
then take it out and cool again if your
colour is full enough then add to your
Dye 2 oz of Madder then run one hour then take
it out cool then add one pound of Madder
more then run one hour longer and if there
is any Blue shade to it dip again in the
same liquor, and warrant you a good colour

Receipt for London Smoke

For 50 yds of Narrow field Cloth
to prepare them take 3½ Roman Vitriol then
run one hour then take your cloth out
add to your Dye 12 of Fustick 2 Camwood 2
Nigwary then run one hour then take your
cloth out add to your Dye 5 of Fustick one
pound of Madder 10 Vitriol then run your
cloth again for one hour longer then if
your shade suits you add to your Dye
2 ounces of Roman Vitriol ½ copperas then
dip your cloth again then cool and add
as much more copperas as you see fit

Receipt for
Makeing Liquid Blacking

7 lb 1/4 Ivy Black 2 oz of [redacted]
Gumarabick 6 oz Sugar 2 qts Vinegar
1 oz oil Vitrol 1/2 gill Sweet oil
1 Gill New Rum

Remarks

Melt your Gum in Vinegar over the fire then take about 1 pt of vinegar put your Gum in then put your sugar in your oil in then stir them then put your Ivy Black in stir it again then put your Rum your Vitrol then let it stand for one hour then put your Vinegar in and it will be fitt for ~~the~~ use

[illegible]

F. Shem[illegible]

Letter 64th and last

Dear friend

In some of my letters which contain directions for beginning and working a green blue vat for dying of woollen I mentioned a substitute for wood which I recommended to be used in the blue dyes I distinguished said substitute No. 2 in the Receipts as liquoor and it remains now for me to inform you of what said Liquor consists

This liquor No. 2 is nothing else but still or liquid from a distillery of grain after the spirit have been distilled out of it a substance which is generally used by distillers to feed cattle and hogs upon you will take however only the clear liquor of it and that as fresh from the distillery as you can get it this liquor is then in a state of fermentation and by putting some of it into the blue dye in such quantities as directed in my Receipts on blue dyes you will find that your new Dye will soon come into a state of fermentation and what is of the greatest

importance you can always maintain your Blue Dyes in a regular state of fermentation by adding from time to time some of said liquor to the Dye as directed before - - - - - - should you have no grain distillery in your neibourhood then you may make use of swill from a distillery of cider or molasses or any other distillery of vegetable substance for all of them have to be fermented before they can be distilled - - - - - - - -

But should there be no distillery in your part of the country then you have to make some fermented liquor yourself and for that purpose you can put into a boiler 50 gallons of water 20 pounds of wheat or rye brane 1 pound of madder and 1 pound of hops boil these together for half a hour then empty the whole into a hoyshead and let it stand till it begins to ferment then you may use the clear liquor of it insted of swill but it will require two gallons of this liquor insted of one of swill

Next I have to inform what liquor No 1 consists of to make this liquor you may put into a barrel about 50 pounds of good pot ash then fill the barrel up with warm water and stir it from time to time till the water has dissolved as much of the pot ash as it can contain and to ascertain wether this liquor is strong enough you will put the silver scale into the liquor and if the ball of the scale stands out of the liquor as far as No 3 or 4 then the liquor is strong enough but should the scale sink down to No 1 or 2 on the ball then the liquor is not sufficiently strong and it must be stirred up for several times more till the scale stands at No 3 or 4 this liquor cannot be made two strong for when the water is fully saturated and of course strong enough the remaining pot ash will settle to the bottom and when you fill the barrel again with fresh water you may add so much less pot ash

to it as you suppose remained on the bottom of the barrel. before you use any of this liquor take off the scum from the surface of it and let it be well settled untill it becomes perfectly clear. you must be careful not to use perb ash instead of pot ash for this will ruin your blue Dye because the perb ash loses a certain earthly salt, by being calcined or burnt in ovens, which is verry essential to the Blue Dye it is therefore unfit to make the said Liquor No 2.

If you should find it too difficult to obtain pot ash then you may make a lye of good house ashes strong enough to keep the ball of the silver scale out of the lye to No 4 and then you may use this lye in the same way as Liquor No 2 or pot ash liquor but if you can obtain pot ash it will be a great deal better

I have further to give you a discription of that silver scale which is so verry essential in regulating the blue Dyes

this Scale consists of a Silver ball nearly in the form of a small egg; from this ball there rises a round hollow stem about six inches long and on the lower part of the ball there is another small stem affixed about two inches long to which is attacked a small weight.. the round stem above the ball is divided by marks and numbers into twenty parts No 1 begins on the top of the stem and No 20 is at the bottom of the stem or near the ball.. - - - - - - -

the ball is marked near the long stem with Nos 1, 2, 3, 4 and 5d - which letter numbers are principally for the purpose of ascertaining the strength of liquor No 1 or pot ash liquor in the manner before discribed.. -

to ascertain if the scale is in good order you have to dip her into some cold water and she will sink down to No 1 on the long stem but should she not sink as low

as that number then you may increse the weight on the bottom of the ~~bott~~ scale a little till she sinks in clear cold water to No 1 ,, — —
On the contrary if the scale should sink below No 1 then you have to ~~at~~ cut off some of the weight at the bottom till the scale will stand at No 1 ,, — —
after you have regulated the scale in this manner you may use her as directed in the Receipts for Blue Dying and you will find her of greatest advantage *
Messrs Joseph I Badger & Co In New Haven will procure such a scale on demand for the sum of ten dollars
Likewise a thermometer to ascertain the heat of the blue Dye — price eight $
it only remains now for me to give you the key to my foregoing Receipts which

are wrote in Characters insted of figures
I adopted this method in order to make
my Receipts only intelligably and use-
ful to those that actually buy them
and to prevent others from obtaining
them unlawfully. I will therefore
not even intrust the press with this
last explanation. but will give it to
you in my own hand writing and you
will please to observe that none are
genuine but those that are signed by
my own hand. — — — — — — — — —!

Hoy

In my Receipts on Dying I
addopted the following Letters
and Characters insted
of figures — — — — —

Washington P = Q or 9 and R
Which I applyd in the following manner
Letter W = A = S = H = I = N = G = T = O = M = P = Q = R
for figures 1 = 2 = 3 = 4 = 5 = 6 = 7 = 8 = 9 = 0 = 1/4 = 1/2 = 3/4

WM = WI = AM = WP
means 10 = 15 = 20 = 17 3/4 and so on
With a little practice you will be able
to understand my Receipts without
Consulting this Key because the word
Washington is easy to be remembered
having now given to you all the
information and Dyeing in my power
I will conclude this last Letter
by requesting you to give my Receipts
a fair trial and make use of your
Dye Stuff for that purpose and
you may depend on success.

P.S. in pages 37 to 44 I introduced Letter Z in several places but it does signify nothing and is only adopted for to mislead those that may obtain the Book unlawfully and without this last of information — therefore Z H or H Z means is the same as if Letter H was alone — — — — — — —

your obedient Servant

John Rauch

From Sul Schwerzerland

William Sherman

Plymouth D 1817

William Sherman

William Sherman

William

John Jones

Dog

John

Samuel

John

William

William

William